MINORITY HYPOTHESES

The task of reducing the number of "dueling" hypotheses underlying analyses and reflecting differing assumptions held by majority and minority members of the DEFT remains unfinished. This writing is intended to bring closure to this issue.

Several "pairs" of hypotheses still appear to lack substantive differences. The following wording is recommended to resolve differences. If the Majority will accept this wording, it is felt that differences will be resolved. If not, differences will remain, and must be highlighted in the DEFT report or other work product emerging from the group.

2. Improve Migration Pathways for Fish

a. Reduce the potential for movement of outmigrating juvenile San Joaquin salmon into the south Delta via the head of Old River.

Hypothesis: Survival of outmigrating San Joaquin salmon is higher when they are kept out of Old River due to the presence of a barrier at the head of Old River or, for any other reason, move into the Delta via the main stem San Joaquin River.

3. Reduce Exports

a. Reduce exports at key times of the year

Hypothesis: Reducing exports at times when entrainment rates leading to high adult-equivalent losses are likely to occur or are incipient, as indicated through near-real-time monitoring, will significantly reduce the likelihood of population-limiting losses.

N.B. Although the DEFT members present at the last meeting advocated removal of the term "adult-equivalent" from this hypothesis, to do so would make the hypothesis meaningless. Logically, the only way for an impact to be population-limiting, especially for one-time spawners, is for that impact to eventually affect the breeding adult population. Thus, if losses are not accounted on an adult-equivalent basis, the hypothesis would be logically invalid. If the majority does not agree with this reasoning, differences will remain unresolved and two hypotheses will be necessary. A separate hypothesis related to adult-equivalence is moot.

4. Reduce Entrainment Losses

a. Reduce losses of juvenile fish at Tracy and Clifton Court Forebay fish facilities.

Hypothesis: Excessive pre-louver predation (especially in Clifton Court Forebay), salvage, handling, transportation and release mortalities of juvenile fish at the CVP and SWP due to inefficient and obsolete facilities can be greatly reduced through expeditious installation of modern, well-designed/maintained fish protection/release facilities, including screens at the entrance to CCFB, and

an aggressive, focused predator management program in specific areas, especially along migration corridors.

5. Improve Delta Habitat

a. Make habitat in the Delta more fish-friendly.

Hypothesis: A through-Delta alternative should require improved habitat in the central Delta to slow fish egg/larval dispersal toward pmuming plants thus allowing these life stages to mature, to increase food web interactions, to stimulate fish growth and survival, and to facilitate fish/habitat relationships which might otherwise be adversely affected by changes in tidal hydrodynamics attributable to south Delta exports.

Certain other wording changes were identified by the group which could add clarity to the differences between majority and minority positions.

1. Improve Delta Hydrodynamics

a. Improve net flows west from the central Delta (Q-West)

Majority Hypothesis: Monthly mean tidally-averaged advective flows are sufficient to explain abundance and distribution of aquatic organisms.

Minority Hypothesis: Consideration of tidal hydrodynamics is a necessary component in the explanation of abundance and distribution of auqatic organisms, and adjustment of water project influences on hydrodynamic conditions in the delta actually experienced by aquatic resources, and intended to reduce risk to these resources, must emphasize real-tide hydrodynamics and associated parameters (e.g. local velocity fields, water residence time and local habitat conditions).